

## ABSTRACT OF THE DISCLOSURE

A multi-stage data logging system comprising a telecommunications stage for receiving, processing, and compressing data from one or more input channels, a recorder stage for storing said data to a memory device, a distribution stage for retrieving said stored data and distributing said data to one or more output channels, and a plurality of interface paths linking said three stages to one another. Different stages of the system can be located wide distances apart and the interface paths linking the three stages can be automatically switched to achieve fault tolerance of the system.